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**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

Exhibit C

**OBJECTIVE DESCRIPTION OF VARIETY
Sunflower (*Helianthus annuus*)**

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country)		FOR OFFICIAL USE ONLY
		PVPO NUMBER

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

COMPARISON VARIETIES

NON-OIL: 1 = Arrowhead 2 = Mingren 3 = Sundak
OIL: 4 = Peredovik 5 = Krasnodarets 6 = Other _____

Place numbers in the boxes (e.g.,

0	8	9
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) for the characters that best describe typical plants of this variety.

1. CLASS:

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1 = Oil Type 2 = Non-oil Type (*Confectionery*)

2. MATURITY:

--	--	--

No. of Days to Head First Visible (from emergence)

--	--

Days Earlier Than

--

Heading Same as

--

Days Later Than

--

Comparison Variety

--	--	--

No. of Days to Harvest Ripeness (from emergence)

--	--

Days Earlier Than

--

Maturity Same as

--

Days Later Than

--

Comparison Variety

3. HEIGHT:

--	--	--

cm Tall at Harvest Ripeness

--	--	--

cm Shorter Than

--

Same as

--

--	--	--

cm Taller Than

--

Comparison Variety

4. STEM:

--	--	--

Length of Internode at Harvest Ripeness

--	--	--

cm Shorter Than

--

Same as

--

cm Longer Than

--

Comparison Variety

--	--

Number of Leaves

--	--

Fewer Leaves than

--

Same as

--

--	--

More Leaves than

--

Comparison Variety

Branching: 1 = No Branching 2 = Basal Branching 3 = Top Branching (*with central head*) 4 = Fully Branched (*without central head*)

Color of Growing Point: 1 = Green 2 = Yellow

5. LEAVES: (Midstem at Flowering)

<input type="text"/> <input type="text"/> <input type="text"/>	cm Blade Length	<input type="text"/> <input type="text"/>	cm Blade Width
<input type="text"/> <input type="text"/>	cm Shorter Than	<input type="text"/>	cm Narrower Than
	Length Same as	<input type="text"/>	Width Same As
<input type="text"/> <input type="text"/>	cm Longer Than	<input type="text"/>	cm Wider Than

Comparison Variety Comparison Variety

Width: Length Ratio: 1 = Narrower than Long 2 = Equal 3 = Wider than Long

Leaf Shape: 1 = Cordate 2 = Other _____

Leaf Apex: 1 = Acuminate 2 = Other _____

Leaf Base: 1 = Auriculate 2 = Truncate

Leaf Margin: 1 = Entire 2 = Finely Crenate 3 = Coarsely Crenate 4 = Other _____

Depth of Margin Indentations: 1 = Shallow 2 = Intermediate 3 = Deep

Attitude: 1 = Erect 2 = Ascending 3 = Horizontal 4 = Descending

Surface: 1 = Smooth 2 = Crinkled (Ridged) 3 = Other _____

Color: 1 = Light Green 2 = Green 3 = Dark Green 4 = Brown

Margin Color: 1 = Green 2 = Yellow

6. HEAD AT FLOWERING:

<input type="text"/>	Ray Flowers:	1 = Absent	2 = Present
<input type="text"/>	Ray Flower Color:	1 = Yellow	2 = Sulfur Yellow 3 = Orange Yellow 4 = Other _____
<input type="text"/>	Disk Flower Color:	1 = Yellow	2 = Red 3 = Purple
<input type="text"/>	Anthocyanin in Stigmas:	1 = Absent	2 = Present
<input type="text"/>	Pollen Color:	1 = White (Colorless)	2 = Yellow
<input type="text"/>	Pappi:	1 = Green	2 = Rust (Red)

<input type="text"/> <input type="text"/> <input type="text"/>	mm Ray Length	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	mm Ray Width
<input type="text"/> <input type="text"/>	mm Shorter Than	<input type="text"/>	<input type="text"/> <input type="text"/>	mm Narrower Than
	Same as	<input type="text"/>		Same As
<input type="text"/> <input type="text"/>	mm Longer Than	<input type="text"/>	<input type="text"/> <input type="text"/>	mm Wider Than

Comparison Variety Comparison Variety

7. HEADS AT SEED MATURITY:

<input type="text"/> <input type="text"/> <input type="text"/>	cm Diameter	<input type="text"/>
<input type="text"/> <input type="text"/> <input type="text"/>	cm Narrower Than	<input type="text"/>
	Same as	<input type="text"/>
<input type="text"/> <input type="text"/> <input type="text"/>	cm Wider Than	<input type="text"/>

Comparison Variety

Receptacle Shape: 1 = Flat 2 = Convex 3 = Concave

Head Attitude: 1 = Vertical (Erect) 2 = Ascending 3 = Horizontal 4 = Descending

No. of Seeds per Head

<input type="text"/> <input type="text"/> <input type="text"/>	Seeds/Head Less Than	<input type="text"/>
	Same As	<input type="text"/>
<input type="text"/> <input type="text"/> <input type="text"/>	Seeds/Head More Than	<input type="text"/>

Comparison Variety

8. SEEDS:

<input type="text"/>	Outer Pericarp:	1 = Clear	2 = Striped Black	3 = Nearly Solid Black
<input type="text"/>	Middle Pericarp:	1 = White	2 = Solid Purple	
<input type="text"/>	Inner Pericarp (Seed Coat):	1 = No Color	2 = Brownish Black	
<input type="text"/>	Stripes:	1 = Absent	2 = Even Black & White Stripes	3 = Broad Black and Narrow White
		4 = Black with Narrow Dark-Grey Striping	5 = Other	_____
<input type="text"/>	Mottling:	1 = Absent	2 = Present	
<input type="text"/>	Shape:	1 = Ovate:	2 = Obovate (Shield)	3 = Narrowly Obovate
			4 = Oblong	5 = Elliptic
<input type="text"/>	Shape: (Cross Section)	1 = Not Curved	2 = Curved	

<input type="text"/> <input type="text"/>	mm Length	<input type="text"/> <input type="text"/>	gm/100 Seeds
<input type="text"/> <input type="text"/>	mm Shorter Than	<input type="text"/>	gm Lighter Than
	Same as	<input type="text"/>	Same As
<input type="text"/> <input type="text"/>	mm Longer Than	<input type="text"/>	gm Heavier Than
<input type="text"/> <input type="text"/>	% Held on 7.9 mm (20/64) Round-hole Screen		
<input type="text"/> <input type="text"/>	% Less Than	<input type="text"/>	
	Same as	<input type="text"/>	
<input type="text"/> <input type="text"/>	% More Than	<input type="text"/>	

9. DISEASE AND INSECTS: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="text"/>	Rust (<i>Puccinia hellanthi</i>)	<input type="text"/>	Sclerotinia Wilt (<i>Sclerotinia sclerotiorum</i>)
	Give Races: _____		
<input type="text"/>	Verticillium Wilt (<i>Verticillium dahliae</i>)	<input type="text"/>	Leaf Mottle (<i>V. albo-atrum</i>)
<input type="text"/>	Downy Mildew (<i>Plasmopara halstedii</i>)	<input type="text"/>	Gray-Mold Blight, Bud Rot (<i>Botrytis cinerea</i>)
<input type="text"/>	White Blister Rust (<i>Albugo tragopogi</i>)	<input type="text"/>	Charcoal Rot, Stem Rot (<i>Macrophomina phasolina</i>)
<input type="text"/>	Broom Rape (<i>Orobanche cannis</i>)	<input type="text"/>	Sunflower Moth, N. American Head Moth (<i>Homoeosoma electellum</i>)
	Give Races: _____		
<input type="text"/>	European Sunflower Moth (<i>H. nebullela</i>)	<input type="text"/>	Other (Specify) _____
<input type="text"/>	Other (Specify) _____	<input type="text"/>	Other (Specify) _____

10. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THAE SUBMITTED VARIETY. For the following characteristics indicate degree of resemblance by placing in the column marked D.R., one of the following numbers:

1 = Submitted variety is less, lighter, or inferior than comparison variety 2 = Same as 3 = More than, darker, or superior.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
Frost Resistance			Leaf Attitude		
Lodging Resistance			Head Attitude		
Neck or Stem Strength			Ray Flower Color		
Branching Type			Seed Shape		
Petiole Length			Seed Color		
Leaf Shape			Seed Striping Pattern		
Leaf Color (Green)			Seed Yield		

11. GIVE THE FOLLOWING DATA FOR SUBMITTED AND A SIMILAR VARIETY*:

VARIETY	HULL (%)	PROTIEN (%)	OIL (%)	IODINE (%)	FATTY ACIDS	
					OLIEC (%)	LINOLEIC (%)
Submitted						
Similar						
Name of Similar Variety						

* Hull, protien, and oil percentages expressed for whole undecorticated seed; acids expressed as percentages of oil.

12. COMMENTS:

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